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DOMINION OF CANADA :

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AS IT WILL APPEAR TO THE
MEMBERS OF THE BRITISH ASSOCIATION
FOR THE ADVANCEMENT OF SCIENCE
IN 1884.

A PAPER READ BEFORE THE SOCIETY OF ARTS,

Tuesday, January 29, 1884,

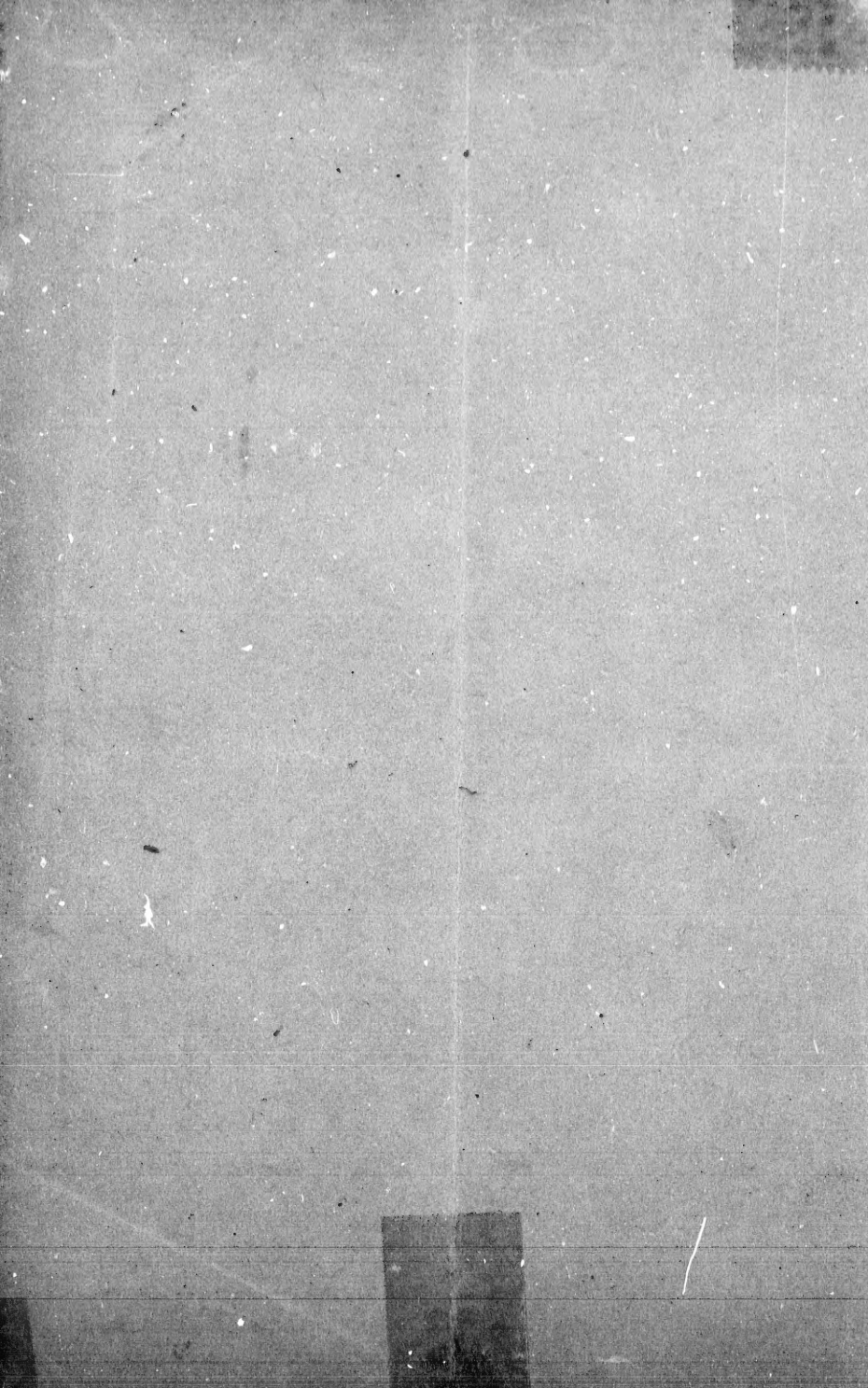
BY MR. JOSEPH G. COLMER,

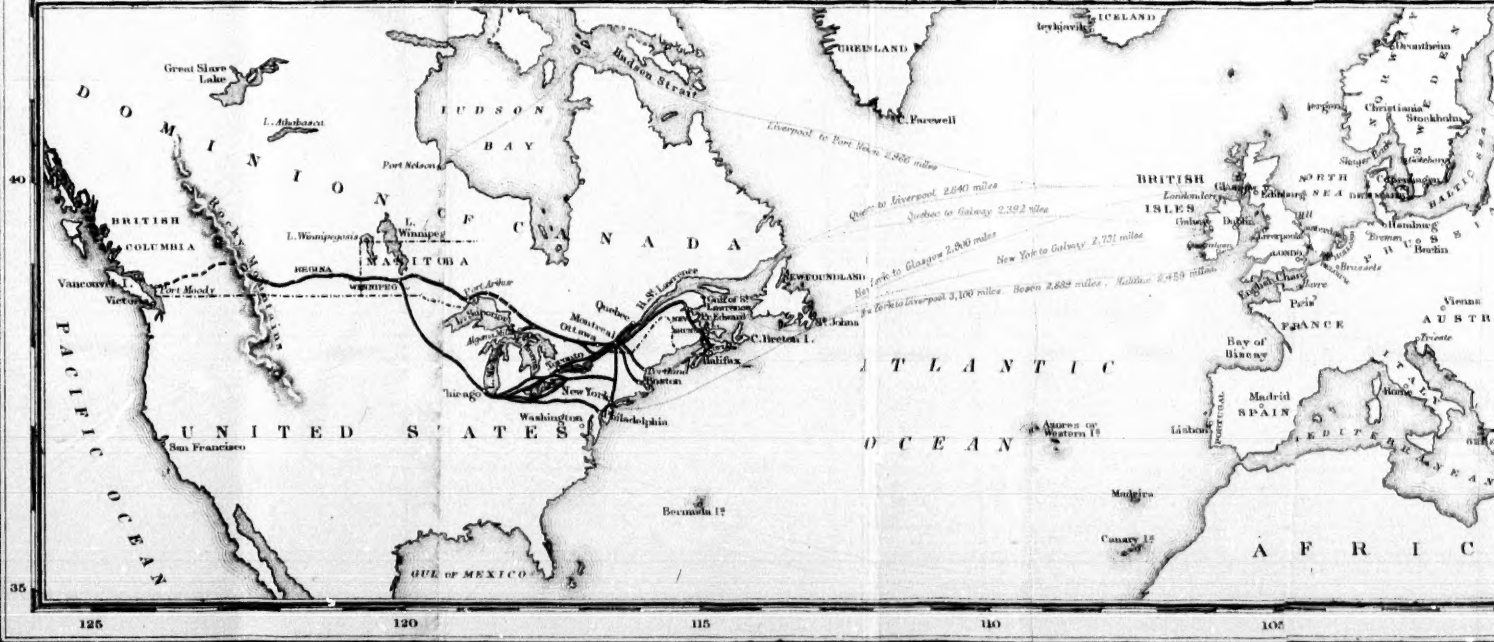
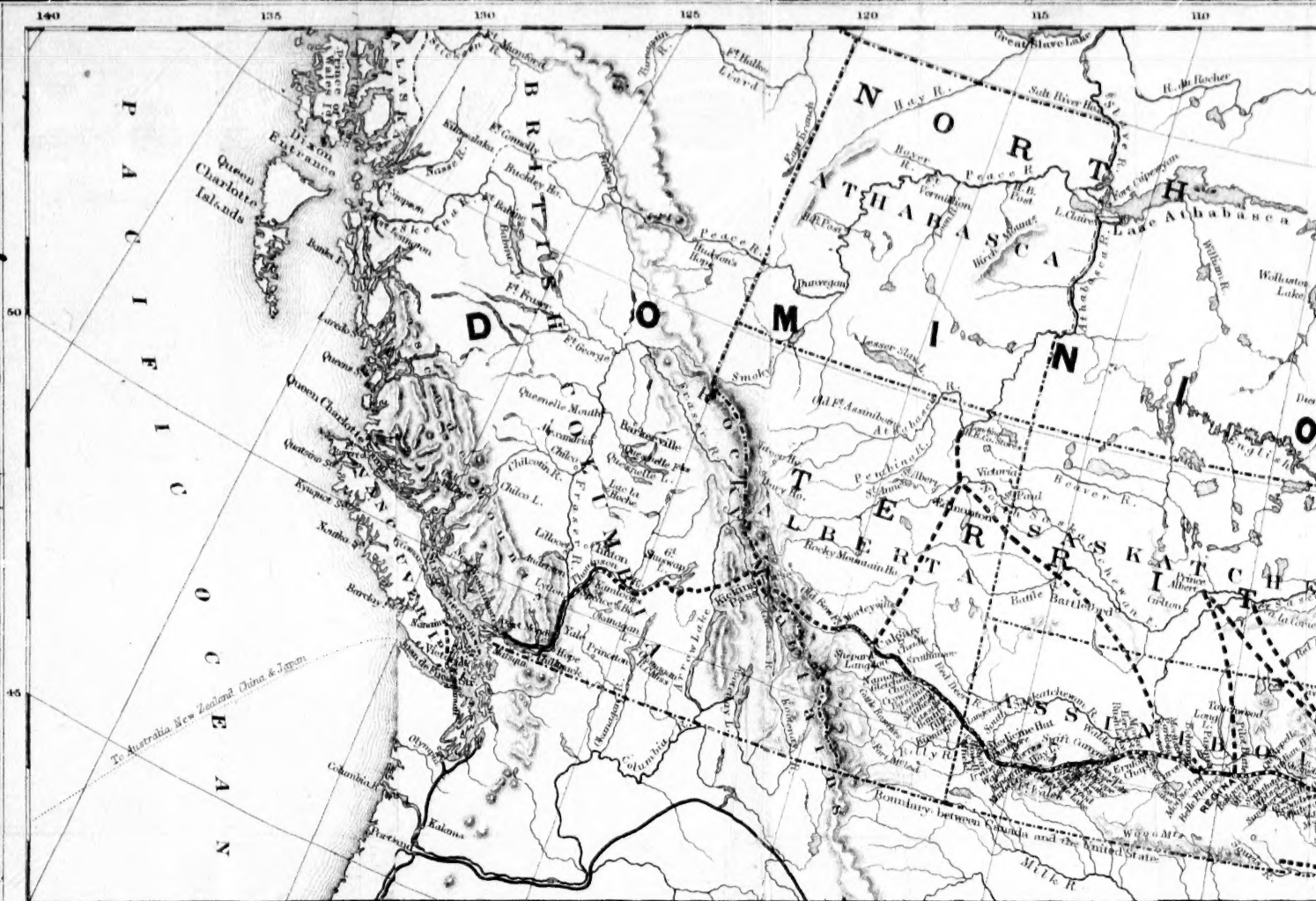
Secretary of the Office of the High Commissioner for Canada.

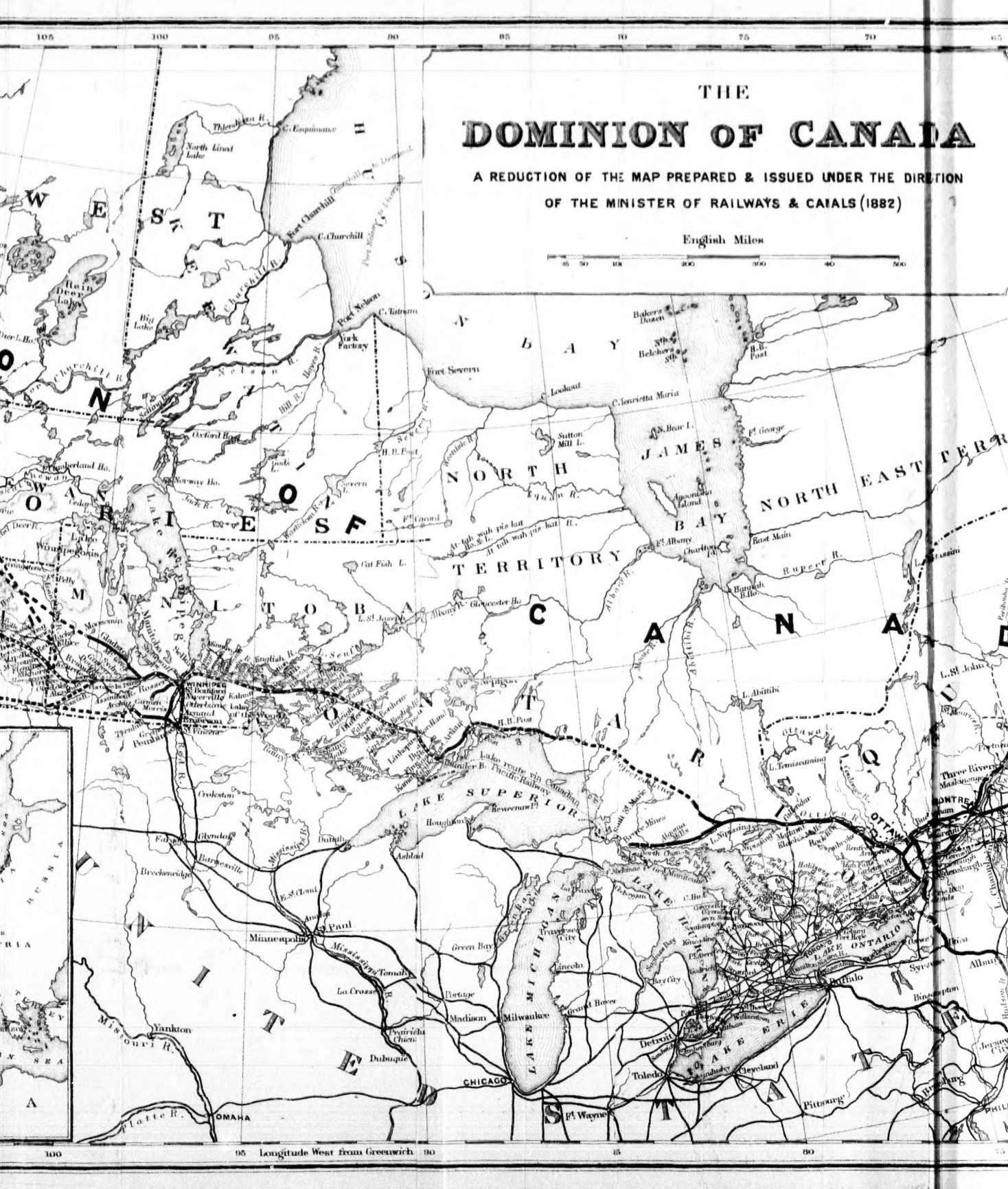
THE MOST HONOURABLE THE MARQUIS OF LORNE, K.T.,
IN THE CHAIR.

London.

JANUARY, 1884.



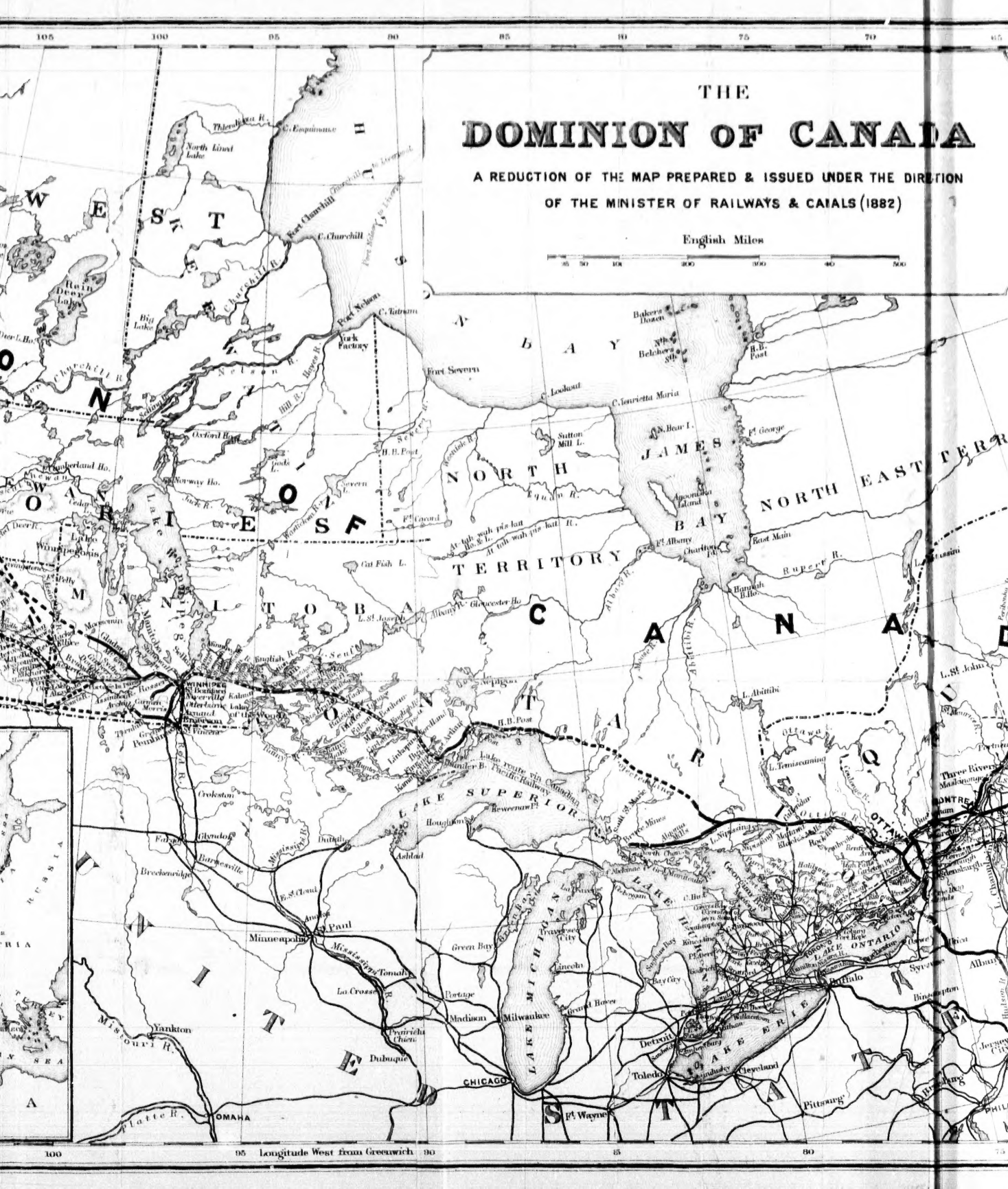


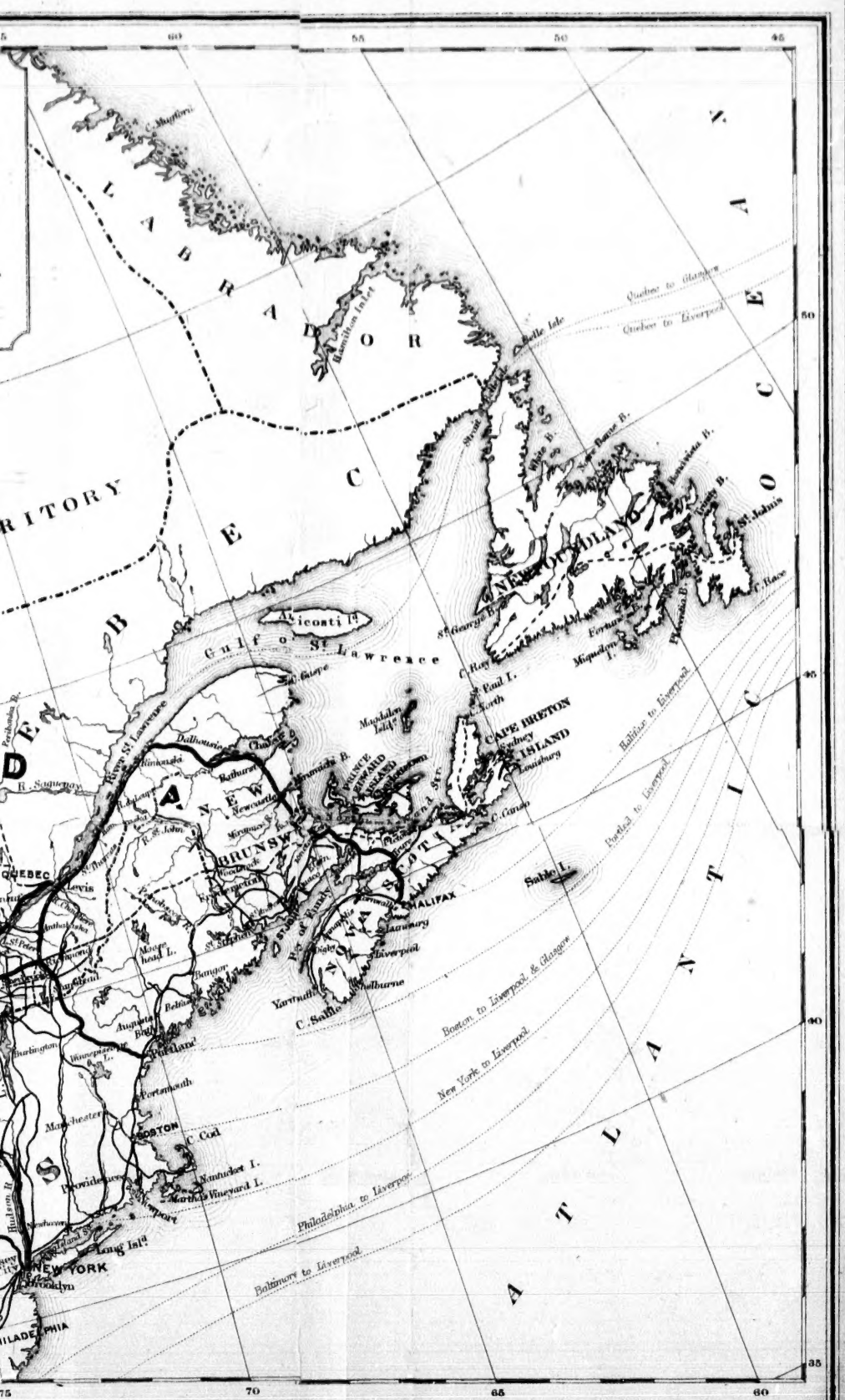


THE DOMINION OF CANADA

A REDUCTION OF THE MAP PREPARED & ISSUED UNDER THE DIRECTION
OF THE MINISTER OF RAILWAYS & CANALS (1882)

English Miles





**"CANADA AS IT WILL APPEAR TO THE
MEMBERS OF THE BRITISH ASSOCIATION IN 1884."**

A PAPER READ BEFORE THE SOCIETY OF ARTS, JANUARY 29, 1884,

BY MR. J. G. COLMER,

Secretary to the High Commissioner for Canada.

MR. COLMER, having been introduced to the meeting by the MARQUIS OF LORNE, read the following paper:—

It is gratifying to see indications, on every side, that the development of the Colonies is attracting much greater attention now than was formerly the case. They are proud to be recognised as important sections of the British Empire, and to know that there is a strong feeling in this country in favour of drawing the bonds of union still more closely together. Much of the indifference shown, not so many years ago, arose undoubtedly from the want of knowledge that prevailed, and this is not difficult to explain. Communication was not easy, and correspondence not very frequent. In the schools, the rising generation were told that the sun never sets upon the Empire; but they were taught little or nothing respecting the importance and resources of the Colonies, and the position they were destined to occupy in the world in the near future. I am prepared to admit, as my opening sentence indicates, that this lack of interest does not exist, at the present time, to the same extent as previously; but a great deal still remains to be done. The Colonies of course owe their origin to the mother-country, but to many minds they occupy somewhat the same position as the little girl in the story, who insisted that she "had growed the rest herself." Lines of steamers now leave for Canada, Australasia, the Cape, and other British possessions, at regular and frequent intervals; and it is becoming more and more the fashion—and a good one it is—to visit the Colonies. It is also significant that the emigration to their shores

grows larger every year. I have spoken so far generally of the Colonies, but all that I have said applies with particular force to Canada. It can therefore be imagined with what pleasure Canadians learned that the British Association for the Advancement of Science had departed from its usual custom, and had decided to hold its meeting in 1884 in the city of Montreal. I may add that the Marquis of Lorne (the late Governor-General) has from the first given the matter most hearty support.

I do not propose in this paper to say very much respecting the early history of Canada, or its progress in the first century after it was ceded to Great Britain. I shall take it for granted that an audience meeting in the rooms of the Society of Arts will be acquainted with these things, and rather treat of its development since the Confederation of the various provinces, which, as you will be aware, was inaugurated under the British North America Act of 1867. Neither do I intend to explain the detailed arrangements that have been made by the Montreal Committee for the conveyance of members of the British Association to the place of meeting, and for their comfort during their stay in the country. These particulars will be furnished in the circular about to be issued. My intention is to place before you some information respecting the social, commercial, and political aspects of the Dominion. Later on I propose to say something of Montreal, and of the principal excursions to be undertaken; and in the meantime must ask you to consider yourselves for a short time in the Economic Section of one of the annual gatherings of the Association.

During the last four or five years the rapidity with which Canada has progressed has been remarkable, and has attracted much attention in Great Britain. The revenue has expanded, the trade has increased, immigration has been growing larger annually, and the rapid construction of the Canadian Pacific Railway has been watched with wonder and surprise in every part of the world.

Before entering upon these points in a somewhat more detailed manner, I must say just a few words as to the extent of Canada, for no paper on the subject would be complete in the absence of that information.

The Dominion, as at present constituted, is estimated to contain 3,470,392 square miles. It occupies about one-half of North America—in the opinion of Canadians not the least important half—and is as large as the United States, exclusive of Alaska. You will be able,

perhaps, to form a better idea of its extent when I say that its area is nearly as great as that of Europe. The country is divided into eight provinces—Ontario, Quebec, Nova Scotia, New Brunswick, Prince Edward Island, British Columbia, Manitoba, and the North-West Territories. This latter district, about which I shall have something more to say presently, has recently been divided into four smaller territories, called Assiniboia, Saskatchewan, Alberta (after Her Royal Highness the Princess Louise), and Athabaska. They each have an area of about 100,000 square miles, so that the word smaller can only properly be used in a relative sense. The older provinces, including Manitoba, but excluding the more recently formed Territories, have local Legislatures, which have authority in matters affecting civil rights and property, the administration of justice, education, control of municipal institutions, and other local questions; while the Dominion or Federal Parliament controls the following:—public debt and property, trade and commerce, postal service, census statistics, militia and defence, navigation and shipping, quarantine, currency and coinage, banking, weights and measures, bankruptcy, patents, copyrights, naturalisation, marriage and divorce, &c. At the head of the Government, and representing Her Most Gracious Majesty, is the Governor-General, which position was occupied with so much distinction, until recently, by our noble Chairman. It is hardly necessary for me to say that under this system of government the country has greatly prospered. I think I may safely add that the members of the Society of Arts, and of that most valuable association, the Royal Colonial Institute, are not without hope that the principles of its confederation may in the near future be extended—not only to Australasia and the Cape, but that they may have a still wider application.

At the last Dominion census, in 1881, the population numbered 4,324,810, the larger proportion being of English, Irish, and Scotch origin. The French Canadians number, however, more than a million, and there are also to be found natives of most of the other countries of Europe. But few, if any, national prejudices are at work. Settlers soon become thoroughly Canadian, and call themselves so; and should they come from the United Kingdom do not forfeit the right of being also Englishmen and Englishwomen. In fact, the population of the Dominion—heterogeneous though its origin may be—is thoroughly loyal to the Queen, and to the Empire. Visitors are generally surprised to

find that there is no poor law system in Canada. There are no general poor-rates and none of the workhouses so common in this country. Consequently there is but little vagrancy or beggary. In most of the large cities and towns there are Benevolent Societies (named after St. George, St. Patrick, and St. Andrew) which deal with any cases of real distress that may arise, according to nationality. The Germans and French have similar Institutions. The question of the population leads me to state a fact which I do not believe is as well known as it ought to be: that, compared with the United States, the growth of Canada has been more rapid than is supposed. In 1776 the former contained about 3,900,000 inhabitants, and in 1881 about 50,000,000, an increase of about 1,250 per cent.; Canada, on the other hand, at the census in 1784 numbered less than 150,000, while in 1881 it had advanced to 4,324,810, an addition of 3,000 per cent. Since 1830, when both countries began to experience the effects of European emigration, Canada has shown an increase of about 480 per cent., while that of the United States has been about 390 per cent. In other respects the progress of the country has been equally satisfactory, and in no way justifies the stigma that, until a few years ago, it was the custom to cast upon the energy, intelligence, and enterprise of the Canadians. Considering the disadvantages under which they have laboured; that their growth has been accomplished without much direct assistance from the mother country, and in competition with the great nation, their neighbour; that the western prairies of the United States have been accessible since 1840, while those of Canada have only had railway communication for about five years, I think it must be admitted, apart from possible national prejudices, that the progress of Canada has been very creditable to its people; and that they have endeavoured, in the words of Sir Alexander Galt, at the Colonial Institute, in 1881, to prove worthy of the great race from which they have sprung.

The revenue, which in 1869 was about fourteen millions of dollars, had increased in 1879 to twenty-three millions, and in 1883 to nearly thirty-six millions. The expenditure, according to the custom of most civilized countries, advanced also, but not for the whole of the time in an equal ratio. During the last three years the surplus has amounted in the aggregate to about seventeen millions of dollars, which, as a general rule, has been applied to the reduction of the taxation of the country, and to the cost of the great public works that

are now in progress. This will be understood by a reference to the public debt of Canada. In 1880 this amounted to \$152,451,588, and in 1882 had advanced to \$153,661,650, an increase of \$1,000,000 only, although in the same period \$24,000,000 had been expended on capital account. The customs duties form the foundation of the revenues of the Dominion, out of which grants are made to the provinces, according to population, towards the expenses of the local governments. Taxes are also imposed by the provinces for educational and other purposes, and by the municipal authorities. These, however, will compare favourably with those levied in other countries. With the increase in the revenue, the prosperity of the people has also been advancing. In the chartered banks the deposits have been growing rapidly, and this is still more apparent in the Dominion and Post Office Savings Banks. The amount standing to the credit of depositors in the latter institutions, in 1879, was \$9,207,683, and in 1882, \$21,768,661. A still further increase is apparent in 1883, but I am not in possession of the actual figures.

Trade and Commerce have advanced by leaps and bounds since the confederation, and I trust you will excuse me if I trouble you with a few more figures. In 1868 the total exports and imports were valued at \$130,000,000, while in 1882 the figures were \$221,556,000—an increase of 70 per cent. in fourteen years. The exports are divided into seven heads—the mine; the forest; fisheries; animals and their produce; farm and agricultural produce; manufactures; and miscellaneous. Timber, agricultural produce, and animals are among the most valuable of the exports, but the manufacturing industry is yearly becoming more important. It will have been seen by those who visited the late International Fisheries Exhibition that Canada has immense wealth along her coasts, and in her rivers and lakes. The produce of the fisheries in 1882 was valued at \$16,800,000; about one-half was exported to different parts of the world. The important maritime position of Canada is well known. The total number of vessels on the register books on the 31st December, 1882, was 7,312, measuring 1,260,777 tons. Assuming the average value to be \$30 per ton, the value of this shipping would be about seven-and-a-half millions sterling. The Dominion in the list of maritime countries occupies the fourth place. The imports include raw material and manufactured goods. The proportion of the aggregate trade with Great Britain is very nearly

fifty per cent., the balance being divided between the United States and other countries. There seems to be no reason why the development to which I have referred should not be as great in the years to come as it has been in the past. I do not mean to say that periods of depression may not be experienced; they occur in every country and under every condition of things, no matter what the fiscal policy has been, and may be described as "National medicine." They are not pleasant experiences, but are not without good results. Still, I must say that in Canada, and in the other Colonies, there should, in my opinion, be less chance of any serious difficulties of this kind than in some of the European countries. In the older provinces of Canada the population is growing rapidly; the area of land under cultivation is annually becoming larger, although there is still an immense quantity awaiting occupation, and the investment of capital in manufactures is increasing. I notice in the census of 1871, that there were in that year only twenty-two cities and towns with populations of 5,000 and upwards, aggregating 494,699. In 1881, the number had increased to thirty-seven, with 641,703 inhabitants. Manitoba and the North-West Territories (which did not appear to advantage in the last census, having at that time only had railway communication for three years) must not be left out of any calculations of the kind. Villages and towns are springing into existence within their boundaries, particularly along the route of the Canadian Pacific Railway, as the British Association will be able to judge this summer. These districts are progressing at a wonderful rate, and there can be no doubt that with their development, and that of the Pacific Province of British Columbia, the future of Canada is largely connected.

I regret that the time at my disposal will not permit me to make some extended remarks respecting the public debt of Canada. I may say generally, however, that it has been applied to the useful work of developing the country; in subsidising railways; in constructing the system of canals connecting the St. Lawrence with the Great Lakes; for lighthouses; the improvement of navigation; and other public works. It is not a record of war and bloodshed, but of peaceful and rapid progress. Many particulars of an interesting nature could also be given respecting the postal and telegraphic system, the various useful purposes for which electricity is utilised, the patent laws for the encouragement of inventions, copyright regulations, the franchise, and many other matters. Anyone, however,

who reads a paper on a subject so vast as Canada, and who is limited to one hour, is obliged to omit much that might with advantage be said. I desire, however, to say a few words respecting the educational system; the laws in operation for the regulation of the liquor traffic; the railway and canal systems of the country; and the question of the climate, which the Marquis of Lorne has properly described as the bugbear of the Dominion.

Long before school boards were established in England, Canada was in the enjoyment of a well-organised educational system. Every township is divided into sections sufficiently large for one school, and trustees are elected to undertake the management of the affairs. This is also the case in the cities and towns. In districts where the inhabitants are divided in their religious opinions, and mixed schools are not possible, the law enables separate schools to be provided. The necessary funds are raised partly by tax upon the ratepayers, and partly by grants from the Provincial Treasuries. Teachers are prepared and trained at normal schools, supported and maintained at the public expense. As a rule, no fees are charged. Education, however, does not rest at this point; for those who can afford it—and the cost is comparatively small—there are schools of a higher grade. In all parts of the country grammar schools are to be found, managed, like the common schools, by trustees. At these, as well as at many excellent private schools, the pupils receive a classical education, and are trained and prepared for the legal and other professions. There are also colleges, possessing university powers, endowed with scholarships of considerable value, open to youths prepared in the lower schools. Toronto, Montreal, and other places have schools of medicine; while the various leading religious denominations have institutions at which young men are prepared for the ministry. For the higher education of girls there are excellent schools, many of which are denominational in character. Some of the schools have libraries of judiciously-chosen collections of books for the use of the pupils. In fact, means of education, both for the rich and the poor, abound in the Dominion. In very many cases the children of immigrants who have arrived in Canada in a state of poverty, very little removed from absolute pauperism, have received a thorough education, and have secured the highest prizes the country offers.

In all the Universities scientific education forms a part of the

course in Arts, and in most of them there are honour courses in Natural and Physical science. McGill College, Montreal, has a faculty of Applied science, including the subjects of Civil, Mechanical, and Mining engineering, and Practical Chemistry ; and in its honour course prepares for field work in Geology. The University of Toronto has similar courses. These institutions, as well as some others, have good chemical laboratories. Elementary science, more especially in Chemistry, Botany, and Physiology, is taught in most of the higher, and, more or less, in the common, schools. The teachers are prepared for work of the kind in the provincial normal schools, in which, among other things, Agricultural Chemistry is taught. There are also several well-appointed agricultural colleges in the provinces of Ontario and Quebec.

The following are the principal scientific societies in Canada, and they all publish their transactions :—

The Royal Society of Canada ;

The Natural History Society of Montreal ;

The Canadian Institute of Toronto ;

The Nova Scotia Institute of Science ;

The Natural History Society of St. John, New Brunswick ; and

The Scientific and Historical Society of Winnipeg.

Such, in a few words, is the educational system of the country. I trust that one of the many results sure to follow the visit of the British Association will be the formation of a similar institution in the Dominion, and that it will do as valuable work in Canada as it has accomplished in the United Kingdom. From information that has reached me I believe that papers on the subjects dealt with in the different sections of the Association meetings will be supplied, from Canadian sources, at Montreal.

The Dominion occupies a prominent position in connection with the promotion of temperance. In the great North-West, that we hear so much of, spirituous liquors are not allowed to be sold under any circumstances ; in consequence of which the Indians in that Territory occupy the satisfactory position they do to-day. At first sight this prohibition might be considered as not likely to be favourably regarded by the European, Canadian, or American settler. But the principle has been so far accepted, and its benefits recognised, that on the recent extension of the western boundary of Manitoba, the population in that portion of the North-West Territories which it was

desired to include, petitioned that the prohibition should be continued. I hope the existence of regulations of this kind will not deter members of the British Association from taking the excursion through the country to the Rocky Mountains. The Lieut.-Governor of the Province has power to give a "permit," that is, to allow a small quantity of alcoholic liquor to be conveyed by travellers, but it is exercised only in cases of illness, as a medical necessity. I state this as a matter of fact, and disclaim any intention of another nature, to which unkind persons might perhaps attribute it.

A new Act was passed during the last session of the Dominion Parliament (it came into operation on the 1st of January), which, I think, will be very interesting, as showing the rapid progress that is being made in social reforms in Canada. The measure provides that the country shall be divided into license districts, identical, so far as possible and convenient, with existing counties, electoral districts, or cities. A Board of Licensing Commissioners, consisting of three persons, will be appointed in each district. One member of the Board must be a county court judge, or other judicial official; another the mayor of a city, or warden of a county, as the case may be; and one is to be appointed by the Government for one year. I mention this to show that every care is taken to ensure the important work being in good hands. A Chief License Inspector, and one or more inspectors, will be nominated by the Board in each district. The feature of the Act is that it determines the number of hotel and saloon licenses to be granted. In cities, towns, and incorporated villages one license may be issued for every 250 of the first 1,000 of the population, and one for each full 500 in excess of that figure, but there may be two hotels in any town or incorporated village where the inhabitants number less than 500. In county towns five licenses may be granted. Two hotels beyond the number the population may warrant, may be licensed for a period of six months, commencing on May 1 in each year, in any locality largely resorted to in the summer by visitors. In incorporated villages, townships, or parishes no saloon licenses will be granted. Shop licenses, which authorise the holders to sell and dispose of any liquors—not less than one pint in quantity—not to be drunk in and upon the premises, may be granted, one for each 400 up to 1,200 of the population, and one for each 1,000 beyond. Any person applying for a license who is not already a licensee under the Act, or under any previous Act, must be

supported by a certificate signed by one-third of the electors of the district. Ten or more electors, and in unorganised divisions five or more, out of 20 householders, may object to any application, and can be heard by the Board, and it will be refused if two-thirds of the electors petition against it. Before any license is granted the applicant must enter into a bond in the sum of \$500, with two sureties for \$150 each, for the payment of all fines and penalties which they may for infractions of the law be condemned to pay. No license will be granted by the Board within the limits of any town, incorporated village, township, or other municipality, excepting counties and cities—if three-fifths of the qualified electors have declared themselves in favour of a prohibition. Hotels and saloons and shops are prohibited to sell liquors from seven on Saturday night till six on Monday morning, and from eleven at night till six in the morning on other days, except for medical purposes under proper restraint. Lodgers in hotels may, however, be provided on Sundays during meals, between the hours of one and three, and five and seven in the afternoon. The hotels and public-houses are closed on the polling days for Dominion, Provincial, or Municipal elections. A very important provision enables two justices to forbid any licensees to sell drink to any person who “by excessive drinking mispends, wastes, or lessens his or her estate, or greatly injures his or her health, &c.,” in any city, town, or district in which the drunkard may be likely to resort. Another clause provides that any husband or wife, whose wife or husband may have contracted the habit of drinking intoxicating liquor to excess; the father, mother, curator, tutor, or employer of any person under the age of 21 afflicted with the same weakness; and the manager or person in charge of an asylum in which any such person resides or is kept, may require the chief inspector of the district to give notice in writing to any person licensed to sell liquors that he is not to supply them to such interdicted person. If I have dwelt at some length on this subject, I hope you will forgive me; but knowing the importance with which the question—particularly with reference to local option—is regarded in this country, I ventured to believe that the experience of Canada might be interesting to you. The measure, as you will observe, is a very drastic one, but its principle has been well received, and it is the natural consequence of previous legislation.

The construction of railways in the Dominion of Canada has been

very rapid since the confederation; and efforts are being made at the present moment to extend and complete the system. In 1870 there were only 2,497 miles open for traffic; in June, 1882, this had increased to 8,069 miles, and in the last eighteen months another 1,000 miles, at least, have been added. There are now, therefore, over 9,000 miles in operation, affording means of communication from the province of Nova Scotia to Ontario, and again from the western shores of Lake Superior to Winnipeg and through the North-West Territories to the Rocky Mountains. The total amount of capital invested in the construction and equipment of railways in Canada, to the end of the fiscal year, 1882, was \$389,285,700. The Canadian Pacific Railway—one of the greatest national undertakings of the age—is being rapidly constructed. It is nearly ready for operation from Montreal to Algoma Mills, on Georgian Bay, and is now being worked from Port Arthur, on Lake Superior, to the Rocky Mountains, a distance of nearly 1,400 miles; and from Winnipeg south to the International boundary, where it connects with the United States railway system. Large numbers of men are being employed on the other sections of the line, and it is confidently expected that in 1886 there will be direct communication from the Maritime Provinces to the Pacific coast entirely through Canadian territory, the importance of which, to Canada and to the British Empire, it is impossible to exaggerate. Many persons may remember that at the last meeting of the Association at Southport, Sir Charles Tupper, the High Commissioner for Canada, also Minister of Railways and Canals, gave a most interesting and graphic description of the railway; and there is no one better qualified to speak respecting it. Prior to 1881 the work was being carried out by the Government; but in that year it was transferred by Act of Parliament to the Canadian Pacific Railway Company. There are about 2,000 miles constructed at the present time, and the track has been laid during the past season at the rate of between two and three miles per day. The difficult work in British Columbia, and on the northern shore of Lake Superior, is being accelerated as much as possible. The line, when complete, will, including branches, be about 3,300 miles long. It has been largely subsidised by the Government, and the work would have been an onerous one for a country with a much larger population than that of Canada. The completion of the line must have a great effect upon British Columbia. That province has not yet been in the enjoyment of

railway communication with the other parts of the Dominion, but as soon as this is accomplished its natural resources and favourable climate will ensure its taking an important position, as it is the only British possession on the Pacific coast of the American continent.

The inland navigation of the Dominion has cost a large sum of money; but it is a work of which the country may well be proud. The canals were constructed to overcome the obstructions of river and lake navigation. What is the result? Vessels of 600 tons can now proceed from the western end of Lake Superior, and from the United States ports of that vast inland sea, to Montreal, by way of Lakes Huron, Erie, and Ontario, and the river St. Lawrence—a distance of nearly 1,300 miles. The locks on the Welland Canal, connecting Lakes Erie and Ontario—rendered necessary by the Niagara Falls—have recently been enlarged, and are now 270 feet long, 45 feet wide, and 14 feet deep. The Canadian route, from the lakes to the ports of transshipment, compared with that to New York and other American ports, possesses some advantages. In the year 1882 about 3,000,000 bushels of grain from the United States were, in consequence, shipped to Europe from Montreal. Take, for instance, the distance from Chicago, on Lake Michigan. It is nearer by some 150 miles to Montreal than it is to New York, *via* Buffalo and Erie Canal; and there are 16 more locks and 89½ feet more lockage by the American than by the Canadian route. In addition, Montreal is 300 miles nearer to England than New York, Atlantic steamers of 5,000 tons can now be moored alongside the wharves at Quebec and Montreal.

The question of the condition and progress of the Indians in the different parts of Canada is always an interesting one. They number about 100,000, and are probably in a more satisfactory position than the aboriginal inhabitants of many other portions of the Empire. There is a special department of state, under the able administration of Sir John Macdonald (the Premier), entrusted with Indian affairs. Efforts are being made for the elementary education of the children, and, according to the latest information, there is a regular attendance in such schools of about 4,000. In addition, there are farms and industrial schools for their tuition in agriculture and in industrial pursuits. The following is an extract from the Report of the Superintendent-General of Indian affairs presented to the Canadian Parliament during its last session;—“The increased desire

among Indians of the older provinces for additional schools, on reserves on which none have as yet been established, or where those already in operation are deemed insufficient, may be regarded as an indication that the much-to-be-desired demand for enfranchisement on the part of some, if not of many, of the bands, may follow as the result of this inclination for further enlightenment, and every facility compatible with reason to enable them to become enfranchised should be afforded those anxious for the step. The law might possibly be, with advantage, amended in this respect, so as to give those desirous of enfranchisement increased facilities for accomplishing their object." This must be regarded as a very satisfactory statement.

The condition of the Indians in the North-West Territory, considering that they have only been under the direct control of the Government for a few years, is also encouraging. Sir John Macdonald says:—"I am glad to be able to report that the advanced condition of the Indians settled upon reserves in several localities in the Territories admitted of the closing, during the past season, of the instructor's farms in those localities. The object for which they were established, namely, the practical exemplification to the Indians of the manner in which farms should be managed, has been attained. It is hoped that next autumn the Indians in several other localities will be sufficiently advanced to admit of a similar change being effected."

It is not to be supposed, however, that although these farms have been closed the Indians will be left without oversight in their agricultural operations, as they might, in such circumstances, rapidly relapse into their old habits. Competent and reliable men will be placed on each reserve to encourage and direct their efforts.

The judicious treatment of the Indians by the Government in all their dealings with them is sure to have its effect in the future. The Bishop of Saskatchewan, in a very interesting address delivered by him last year, said:—"By-and-bye I have no doubt that we shall see a very grand result in the Dominion of Canada in reference to these Indians. I am one of those hopeful individuals who look forward to the day when we shall see the Indian population making their bread honestly side by side with the white men who have come into the country as immigrants; and all this will be the direct result of that eminently wise and far-seeing and thoroughly English policy which has been so consistently pursued by those who conduct the destinies of the government of Canada."

It has often struck me as a significant fact that the complaints against the climate are made to refer, at the present time particularly, to Manitoba and the North-West Territories. It will be remembered, however, that the statements now being made respecting Manitoba were formerly applied to Ontario, Quebec, Nova Scotia, and New Brunswick. These provinces, it was said, could never grow fruit to any extent; it would be impossible that they should ever become famous for raising cattle; and that the season was manifestly too short to permit of agricultural operations being carried on successfully and profitably. It is hardly necessary to state how completely these prophecies have been falsified. Canada has a reputation for fruit far beyond its boundaries. Canadian apples probably bring the highest price of any that are imported into the English markets. Those who have visited the country will know that it is famous for many other fruits besides apples, and that many species grown in England under glass, flourish there in the open air. An important portion of a recent article in the *Times* on "Fruit Culture" was devoted to Canada. As a cattle country, it is taking an important position. Not only are there sufficient cattle and sheep and other animals to supply the demands of its own population, but on an average about 60,000 to 70,000 head of cattle and 300,000 sheep are exported annually. The larger proportion of the cattle are sent to Great Britain, while the sheep principally go to the United States. There is no cattle disease in Canada, so that the farmers are very fortunate in this respect. There are many articles of Canadian farm produce which have attracted considerable notice in this country. The total value of the exports under the heading of "Animals and their Produce," in 1882 was \$20,500,000; of this, the United States took about \$6,500,000, representing chiefly horses, horned cattle, sheep, butter, and eggs.

With regard to agriculture, a good deal of misapprehension seems to prevail; but that the climate is not in any way injurious to that important pursuit is proved by the increase of the population, the largely extending area of land brought under cultivation, and the rapidly increasing quantity of the produce that is grown and exported. In 1882 the value of the agricultural exports was \$31,000,000; of this, \$18,000,000 represents barley, oats, rye, wheat, hay, potatoes, &c., sent to the United States. It is not generally understood that the farmer in Canada has to perform in the winter very much the same sort of

work as the farmer in this country ; after the harvest is over, he does as much ploughing as possible—and this is the case in England. Very little actual work is done on the land in either country during mid-winter, for equally obvious, though different, reasons. But cattle have to be fed, cereals threshed, machinery put in order, buildings repaired, and carting done, which latter, by the way, the Canadian farmer, owing to the snow, is able to do very cheaply. Then again, snow in Canada is not considered a disadvantage ; it destroys insects and pulverises the soil. It may be that the spring commences two or three weeks later than in England ; yet the conditions for the rapid growth of all produce are so favourable that the crops of the two countries are about equally advanced by the middle of July. It is commonly stated, even now, that Canada has an eight-months winter. I feel that it is hardly complimentary to the intelligence of this audience to notice such a remark seriously, but I came across some very interesting statistics the other day which seem to me to refute, very clearly and forcibly, any statements of this kind ; I refer to the dates of the opening and closing of the navigation of the St. Lawrence during the last twenty years, and of the canals connecting the river with the great lakes. I find that, at Montreal, the river, on an average, for the last ten years, was closed for navigation 141 days annually ; at Toronto, 123 days ; and on the Welland Canal about the same period. In considering these figures it must be remembered that, although navigation is reported as closing or opening on a particular day, the river or canals are properly navigable for several days in addition, as the steamers and other vessels have to leave before the frost commences, and they do not enter the river for some days after there is open water. The average winter may therefore be taken at about four and a half months—sometimes it is longer by a few days. Between Manitoba and the North-West and Ontario, there are a few days difference—in favour of the latter. British Columbia probably possesses the finest climate in North America ; it has all the advantages of that of England without its disadvantages. Ask a Canadian, or an Englishman who has spent a winter in the Dominion, which he prefers, the climate of Canada or that of this country, and you will find that he will not hesitate in his answer.

The cold is not always to be measured by the thermometer. The humidity of the atmosphere is the real criterion by which the effects of the temperature must be judged. I have worn in England clothing as

warm as I have found necessary in Canada. If the climate were as humid as that of Great Britain, the low temperatures that prevail might be detrimental; but the dryness of the air prevents any such consequences, and the country is a very healthy one. Another thing, in Canada one is always prepared for the cold. Here it is not so. It is not usual there for ladies to put on shawls when passing from one room to another. In winter the houses are far warmer than in this country.

In the spring you will find wild flowers as prevalent as in England; and in August wild fruits and delicate ferns abound. Besides, if the climate were the wretched one that has been stated by persons who have but little knowledge of it, and so detrimental to the prosperity and progress of the country, so many people would not have gone there, and the population and the agricultural industry would not have increased with the rapidity that is now apparent.

Having endeavoured briefly to give an idea of Canada, as it will appear in several aspects to the Members of the British Association, I will now make a few remarks respecting Montreal, and some of the excursions to be undertaken after the meetings are over.

The first thing that strikes the visitor to Montreal is the grandeur of the River St. Lawrence, and the splendid position the city occupies. It is situated on the left bank of the river, at the south-east corner of a triangular island formed by the mouths of the River Ottawa, where, after a course of 600 miles, it enters the St. Lawrence. The waters of the two rivers do not at once mingle; the line of junction is apparent for many miles; the clear blue water of the St. Lawrence washing the right hand, and the turbid stream of the Ottawa the left hand, bank. The city is built on a series of terraces rising towards Mount Royal, from which it takes its name. The summit of the mountain—as it is there called—is about 700 feet above the level of the river. I have seen no place of its size (its population numbers about 190,000) which contains so many fine buildings both for business and residential purposes.

A whole paper could very easily be written about Montreal, and a very interesting one it would be. In the business portion one cannot but be impressed with the splendid piles of warehouses and premises, giving it an appearance of solidity not very common in colonial cities, while up towards the base of the mountain will be found street after street of handsome residences hardly to be surpassed even in England.

Then to climb up to the mountain and see the city stretching beneath you, with the river in the distance spanned by the Victoria Bridge, is a sight that once seen will not soon be forgotten. Montreal is known in America as the city of churches, and some of them are very fine specimens of architecture. Mark Twain, in a speech at the Windsor Hotel, not very long ago, said that "he never was in a city before where one could not throw a brick-bat without breaking a church window." I will not say that the churches are quite so numerous as this remark would imply. Whether the people are, however, better than their neighbours for their religious surroundings I shall leave their visitors to judge.

Montreal is the chief commercial city of Canada, and although it is 900 miles from the ocean the largest steamers crossing the Atlantic will be found moored alongside the wharves. Between Quebec and Montreal there is always a depth of 30 feet of water, excepting for a distance of 30 miles, chiefly in the Lake St. Peter. In 1851, when the work of deepening the channel at this part of the river was commenced by the Harbour Commissioners of Montreal, there was not more than 11 feet of water on the flats of the lake. This, however, has now been increased to 26 feet, and the artificial channel is 300 feet wide at its narrowest part. This great engineering work has made Montreal. Had it not been accomplished it could not have occupied the position it does to-day. The total length of the wharf accommodation is $4\frac{3}{4}$ miles, of which two-thirds is available for vessels drawing $25\frac{1}{2}$ feet. It has every convenience for loading and despatching ships, and I remember myself that on one occasion a large ocean-going vessel arrived one day and was unloaded, re-loaded, and despatched the next day. A walk along the river street will give an idea of the bustle and activity of the place. The wharves at which the ships discharge are several feet below the level of the road, so that the whole proceedings can be surveyed at a glance. Not only is Montreal the Liverpool of Canada, but it is a large and growing manufacturing centre. A fitting companion to the splendid wharves and shipping accommodation is the Victoria Bridge, designed by Robert Stephenson, which must be considered one of the finest structures of the kind in the world. It is 9,184 feet long—in fact, nearly 2 miles—and carries the Grand Trunk Railway over the St. Lawrence. The first stone was laid in July 1854, and the first

passenger train passed over it on the 19th December 1859. The total cost amounted to £1,200,000.

The appearance of the city from the river is very attractive. Mr. W. D. Howells, the American writer, says of it:—"For miles the water front of Montreal is superbly faced with quays and locks of solid stone masonry, and thus she is clean and beautiful to the very feet. Stately piles of architecture, instead of old tumble-down warehouses that dishonour the waterside in most cities, rise from the broad wharves; behind these spring the twin towers of Notre Dame, and the steeples of the other churches above the roofs."

Of the view from the tower of the Parish Church of Notre Dame, which is 220 feet high, he says in one of his works:—"So far as the eye reaches it dwells only upon what is magnificent. All the features of that landscape are grand. Below you spreads the city, which has less that is really mean in it than any other city of our continent, and which is everywhere ennobled by stately civic edifices, adorned by stately churches, and skirted by full-foliaged avenues of mansions and villas. Behind it rises the beautiful mountain, green with woods and gardens to its crest, and flanked on the east by an endless fertile plain, and on the west by another expanse, through which the Ottawa pushes, turbid and dark, to its confluence with the St. Lawrence. Then those two mighty streams commingled, flow past the city, lighting up the vast country to the south, while upon the utmost southern verge, as on the northern, rise the cloudy summits of far-off mountains."

The British Association will probably hold its sectional meetings in the buildings of the McGill University. This Institution owes its origin to a Montreal citizen, James McGill, who died in 1813, leaving a fortune valued at that time at £30,000—for the purpose. The property of the College is now estimated at more than half a million dollars. The latest large benefaction which it has received is the Peter Redpath Museum, valued at more than \$100,000. This was opened in 1882, and was the gift of a gentleman of that name. Its forty professors and lecturers include some of the most eminent men in their department in the Dominion, and its students may be stated in round numbers at about 500. It has four Faculties—Arts, Applied Science, Medicine and Law. Being non-denominational it has no Theological Faculty, but it offers advantageous terms of affiliation to Colleges where such

degrees may be obtained. There are other excellent educational institutions in the city.

There are many objects of interest in and around Montreal well worth seeing, for which facilities will be provided. Means of conveyance are abundant, excellent, and moderate in cost. I would specially mention the Lachine Rapids; but there are others too numerous for me to mention. Further afield are Quebec, Ottawa, the Capital of the Dominion (the residence of the Governor General) with its splendid Parliament Buildings, and its miniature Niagara, the Eastern Townships of Quebec with their romantic lake and landscape scenery, and there are also excursions through the famous Thousand Islands of the St. Lawrence. Niagara Falls will certainly not be omitted. I have said a good deal of Montreal in this paper; but it is not the only city worth visiting by any means. In addition to Quebec and Ottawa there are Toronto, known as the Queen City of the West, Hamilton, London, and many others, while the Maritime Provinces of Nova Scotia and New Brunswick will be very interesting to those who are able to visit them on the journey home, embarking at Halifax for England.

The principal excursion will be to Winnipeg and the Rocky Mountains. The present arrangement is for a special train to start from Montreal over the Canadian Pacific Railway to Algoma Mills on Georgian Bay. At this point passengers will embark on board the new large steel steamships of the Company, and proceed to Port Arthur, at the western end of Lake Superior, the voyage occupying about twenty-four hours. The scenery through the Lake is grand and picturesque. From Port Arthur the party will be conveyed by rail to Winnipeg, where I imagine a short stay will be made. This city was formerly known as Fort Garry, one of the posts of the Hudson's Bay Company. In 1870, when the Territories were taken over by the Government, the population numbered a few hundreds. Now it is estimated to contain 30,000 people. The journey from Winnipeg to the Rocky Mountains will probably take about two or three days, according to the stoppages that are made on the way. The North-West Territories, *i.e.*, that portion of the country between the boundary of the Province of Manitoba and the Rocky Mountains, are estimated to contain about 250,000 people, while a few years ago the only inhabitants were the Indians. I must not, however, omit to mention the officers of the Hudson's Bay Company, and those devoted servants of the

Church, to whose fair treatment, careful management, and civilising influences, the satisfactory position which the Indians occupy to day is greatly due. The country is dotted with settlements here and there, formed by men from England, Ireland, Scotland, and different parts of Europe, besides Canadians and Americans, who have removed their homes to this region. The "illimitable wilderness," as the late Lord Beaconsfield described it, is gradually being cultivated; and golden fields of wheat, and other cereals, are taking the place of those vast seas of grass which formerly covered the prairies. It is truly said that he is a public benefactor who causes two blades of grass to grow where but one grew before, and in my opinion the same remark will apply to those who in Manitoba and the great North-West have made fields of wheat to grow where but wild grasses flourished before.

The visit will also be most important from ethnical and anthropological views, from the investigation by our scientists of the vast extent of treeless prairie they will pass over, and in connection with the geological features of the country. For a time it was said that its settlement would never be possible owing to the absence of timber, both for building and for fuel. Both these difficulties have been removed by the discovery that immense forests exist, and that beds of coal and lignite underlie the whole of the western portions of the Territory. Those who were present when the Marquis of Lorne read his recent interesting paper at Exeter Hall, will remember having seen a specimen of the coal in the room. It has since been subjected to analysis, at the Royal School of Mines, with most satisfactory results, and it is stated to be suitable for both domestic or mechanical purposes. In this connection I call to mind an eloquent remark made by the Bishop of Saskatchewan on the occasion to which I have previously referred, to the effect that if the country had not been intended to provide homes for millions of our fellow men, Providence would never have placed the hidden treasure of an inexhaustible coal supply there for the use of man.

Emigration may not be a matter connected with abstract science, but I do not think my paper would be complete without some reference to it. It is an economical problem of immense importance both to Great Britain and to Canada. Here there are thousands upon thousands who are unable to procure a living, and the wonder is that they manage to exist at all. In Canada there are millions of acres of land practically unoccupied capable of affording food and employment

for any number of people. It is an admitted fact that some outlet must be found for the surplus population of this country, and it is equally necessary for Canada to add to its population. The annual increase is small compared with the extent of the land waiting to be occupied, and the rapid development of the country is therefore very much connected with the question of emigration.

5,000,000 of people have left Great Britain during the last 30 years, of whom 1,400,000 have gone to the Colonies, and 3,300,000 to the United States. If means could have been found years ago to direct this stream of wealth to our own possessions, they would have occupied a much greater position than they do to-day. The Empire would have been much stronger, and the stream would have continued to flow in that direction to the advantage of our trade and commerce. It would for ever have settled the question of the food supply of the country, besides many other subjects that are now troubling economists.

The Canadian Government has been endeavouring, and considering all the circumstances, with some success, to encourage settlement in the Dominion. Not only are "assisted passages" offered to the different kinds of labour--particularly farm and general labourers, certain classes of mechanics, and domestic servants--which have been in great demand during the last few years, but free grants of land may be obtained by those who are able to command a small capital. In the older provinces these are covered with bush, and are not, therefore, altogether suitable for European settlers; but in Manitoba and the North-West Territories there are millions of acres of fertile land available, ready for the plough, and any *bonâ fide* settler may obtain 160 acres on payment of £2, to cover the cost of the survey and the preparation of the necessary documents; he has also the right to pre-empt a similar quantity at from 8s. to 10s. per acre. Before obtaining a title to the land, the settler is obliged to reside on the homestead at least six months, annually, for three years, and to perform certain minor conditions of a not very onerous nature, viz., to put a reasonable but undefined portion of the ground under cultivation, and to erect a house.

For those who are possessed of capital, and do not desire to undertake the exigencies of pioneer life, improved farms--farms under partial cultivation, with the necessary buildings erected, &c.--can be purchased in every province at from £2 to £20 per acre, according to position, and the conveniences that are offered. As a general rule, the

emigration to Canada, during the last few years, of which I have personal knowledge, has been both satisfactory to the Dominion and to the people who have settled there. Thousands of persons have proceeded to the country during that period, through the offices of the Canadian Government, and I am able to say that hardly a complaint has been received from any such persons that they were not satisfied with their reception, or with their prospects. This is a particularly gratifying fact. The conditions of successful settlement are very similar to those which will command success anywhere. If a man is prepared to work and to adapt himself to circumstances, there is no reason whatever why he should not, with ordinary good fortune, do well in Canada. The Colonies are certainly not the places for what are known as "soft things," and I have no doubt that some of the failures of which we hear arise from unrealised expectations of the kind, or from the persons having proceeded without obtaining proper advice as to whether they were suitable, and as to what they should do on their arrival. There are Agents of the Government in every important place, to whom new settlers of every class are directed to proceed, with the certainty of receiving proper advice and, almost invariably, where it is necessary, assistance in obtaining employment.

I have no doubt that when the members of the British Association see the enormous resources and capabilities of Canada, and its suitability for the absorption of an immense population, their thoughts will revert to the condition of things as they are now to be found, not only in this country but in other parts of Europe, and one good object will have been served if the visit should result in some well-organised and systematic proposal for a remedy of the evils, resulting from the rapid increase of the population and the competition in the labour market, which have recently been attracting so much attention.

In a few days a circular will be issued by the British Association explaining in detail the arrangements that have been made in connection with the meeting in Montreal; but I have in advance endeavoured to place before you, briefly, some of the more prominent of the social, political, and commercial aspects of the country at the present time. If I have not succeeded as well as I should have liked, I have the satisfaction of knowing that among those present, there are many eminently qualified to supply any deficiencies of which I may have been guilty. There is every reason to believe that the gathering will be a success in every way, and

I trust the Association will bring back with them very pleasant reminiscences of the occasion—as warm and as cordial as the feelings of satisfaction and pleasure with which they will be received, not only in Montreal, but throughout the Dominion.

A discussion took place at the conclusion of the paper, in which the following gentlemen took part:—Sir Alexander Galt, G.C.M.G.; Mr. Staveley-Hill, Q.C., M.P.; the Right Rev. the Bishop of Saskatchewan; Captain Colomb; Captain Bedford Pim; and Mr. Cornelius Walford.